

DERWENT-ACC-NO: 1976-59001X

DERWENT-WEEK: 197631

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TITLE: High strength sintered titanium alloy prodn - by mixing titanium powder, aluminium powder and iron-chromium alloy powder

PATENT-ASSIGNEE: SUMITOMO ELECTRIC IND CO[SUME]

PRIORITY-DATA: 1974JP-0146153 (December 18, 1974)

PATENT-FAMILY:

PUB-NO	PAGES	PUB-DATE	
LANGUAGE		MAIN-IPC	
JP 51071206 A		June 19, 1976	N/A
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JP 82010938 B		March 1, 1982	N/A
000	N/A		

INT-CL (IPC): B22F003/12, C22C001/04 , C22C014/00

ABSTRACTED-PUB-NO: JP 51071206A

BASIC-ABSTRACT:

Ti powder, Al powder, and Fe-Cr alloy are mixed in proportion Al 0.5-5 wt.%, Fe 0.5-8 wt.%, Cr 0.5-8 wt.%, and balance Ti. The mixt. is compression-moulded. CCl<sub>4</sub> soln. of e.g. Zn stearate is coated to moulding die as lubricant. The moulding is sintered in vacuum for 30 mins. at 1250 degrees C. Addn. of Al may be made in a form of Fe-Al alloy powder. With Cr added in form of Fe-Cr alloy powder there is no sublimation loss in sintering process. Powder surface has no oxide layer, diffusion of Cr is easy, Fe incorporated in a form of Fe-Cr

alloy powder may not form azeotrope with Ti, so dimensional precision, and strength will not reduce after sintering.

TITLE-TERMS: HIGH STRENGTH SINTER TITANIUM ALLOY PRODUCE  
MIX TITANIUM POWDER  
ALUMINIUM POWDER IRON CHROMIUM ALLOY POWDER

DERWENT-CLASS: M22 P53

CPI-CODES: M26-A02; M26-B06;